U.S. Department of Energy

Information Resource Management Strategic Plan

FY 2005 - 2007

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MESSAGE FROM THE CHIEF INFORMATION OFFICER

I am pleased to present the Department's Information Resources Management Strategic Plan. This plan represents the road map to implement the Department's shared vision for information management that effectively meets the Nation's Energy and National Security challenges. This vision leverages our capabilities to meet the Department's needs today and focuses our activities to provide innovative solutions to meet the Department's future challenges. Through employing e-business technologies, sound infrastructure management, protective cyber security controls, and effective portfolio management, the Department is bettered positioned for all information management challenges. The IRM Strategic Plan outlines the IRM vision, goals, outcomes, strategies for accomplishing them and provides the basis for evaluating performance over the next three years.

All of us at the Department of Energy view information resources management as a critical component in achieving the Department's Mission, Strategic Goals, the President's Management Agenda, E-Government Strategies, and Homeland Security Strategies. Information Resources Management is further committed to meeting the Department's overarching mission of ensuring national security.

By working collaboratively, the Department can meet its program needs, support its customers, and utilize IT as enabler to further its vast missions.

1.0 INTRODUCTION

The Chief Information Officer (CIO) at the U.S. Department of Energy (DOE) has primary responsibility to ensure that Information Technology (IT) is acquired and information resources are managed in a manner consistent with statutory, regulatory, and Departmental requirements and priorities. With this responsibility, the CIO provides information resources management advice and assistance to the Secretary of Energy and to other senior managers. The CIO also coordinates and articulates a shared vision and corporate perspective among the Department's information activities, which permits the CIO to champion Departmental initiatives that effectively manage information and provide for value-added corporate systems. It is in this capacity that the CIO has prepared and now presents DOE's Information Resources Management (IRM) Strategic Plan for FY 2005—2007.

While the IRM Strategic Plan serves as the strategic document for the Office of the Chief Information Officer (OCIO), it builds from the operational and tactical plans of each OCIO element ranging from IT human resources to E-Government. The IRM Strategic Plan describes what will be done over the next three years, while the tactical and operational plans describe how these goals will be accomplished. Together, these plans permit the OCIO to more effectively know if its efforts are accomplishing its strategic goals, objectives, and outcomes, thereby supporting DOE in its efforts to meet its mission.

In addition to this internal focus, DOE recognizes the need to integrate external policy directions as defined by Congress and the Administration into its IT initiatives. The DOE IRM Strategic Plan responds to the Government Paperwork Elimination Act (GPEA) of 1998, the E-Government Act of 2002, the Clinger-Cohen Act of 1996, the Federal Information Security Management Act (FISMA), Office of Management and Budget (OMB) Circular A-130, the Government Performance Results Act of 1993, the Federal Enterprise Architecture, and the President's Management Agenda (PMA).

The scope of the IRM Strategic Plan addresses all information resource elements including, but not limited to: Business and Information Management, IT Human Resource Management, Enterprise Architecture, Capital Planning and Investment Control (CPIC), Cyber security, IT Operations, and E-Government. The scope also includes all DOE locations: Federal sites, laboratories, and management and operational facilities. The IRM Strategic Plan communicates the IT strategies as they link to the overall Departmental Strategic Plan and thereby ensures proper guidance and technological support to accomplish DOE's critical-mission requirements.

2.0 IT STRATEGY OVERVIEW

2.1 Department of Energy Mission

DOE is responsible for fulfilling its mission of

> *"advancing the national, economic, and energy security of the United States; promoting scientific and technological innovation in support of that mission; and ensuring the environmental cleanup of the national nuclear weapons complex."*

2.2 Department of Energy Information Technology Vision

DOE's IT Vision aims to affect governance and processes in order to provide access to modern, reliable, and secure IT infrastructure and systems to support and enhance DOE's mission in the 21st century.

2.3 Strategic Goals Overview

DOE views IRM as a critical component in achieving the Department's Mission, Strategic Goals, the PMA, E-Government Strategies, and Homeland Security strategies. The OCIO has carefully selected IRM Strategic Goals and Objectives that reflect the Department's commitment.

Figure 1 — Information Resources Management Strategic Plan

Strategic Goal 1:	**Simplify access to DOE information and products**
Objective 1:	Partner and support the Presidential E-Government Initiatives.
Objective 2:	Support the internal DOE E-Government initiatives.
Strategic Goal 2:	**Institute a robust IT governance program within DOE**
Objective 1:	Enhance CPIC processes for Information Technology.
Objective 2:	Maintain a complete, mature enterprise architecture.
Objective 3:	Ensure effective IT project performance.
Objective 4:	Enable asset and configuration management.
Objective 5:	Implement enterprise licensing.
Objective 6:	Recruit, develop, and retain a qualified, professional IT workforce.
Strategic Goal 3:	**Reduce the number of cyber security vulnerabilities at DOE**
Objective 1:	Ensure compliance with FISMA and all other cyber-security Government-wide regulations, policies, and procedures.
Objective 2:	Implement a comprehensive DOE-wide security-management program to improve cyber security.

In accordance with OMB Circular A-130, DOE's IRM Strategic Plan supports the Department's strategic goals and direction. The IRM Strategic Plan provides a description of how information resources management activities help accomplish the Agency's mission and ensures that IRM decisions are integrated with organizational planning, budget, procurement, financial management, human-resources management, and program management.

In September 2003, the Department released a new Strategic Plan that will meet the Nation's Energy and National Security challenges. The DOE Strategic Plan provides direction for the next 25 years by "focusing our capabilities to meet today's needs and provide innovative solutions to tomorrow's challenges." The Department has further integrated the Strategic Plan's long-term and intermediate goals into the annual performance budget. This performance structure establishes a concrete link between the Strategic Plan's goals and the Department's annual budgets, performance metrics, and performance reporting. Table 1 below illustrates the strategic goal for each of the four business lines to which the performance structure ultimately aligns.

Table 1 — Alignment of DOE Business Lines and Strategic Goals

DOE Business Lines	DOE Strategic Goal
Defense	To protect our national security by applying advanced science and nuclear technology to the nation's defense.
Energy	To protect our national and economic security by promoting a diverse supply and delivery of reliable, affordable, and environmentally sound energy.
Science	To protect our national and economic security by providing world-class scientific research capacity and by advancing scientific knowledge.
Environment	To protect the environment by providing a responsible resolution to the environmental legacy of the Cold War and by providing for the permanent disposal of the Nation's high-level radioactive waste.

By aligning the IRM Strategic Goals to the Department's Strategic Goals, the IRM activities are positioned to support the Department's mission and can be integrated within the overall DOE performance structure. This integration further solidifies IRM activities throughout organizational planning, budget, procurement, financial management, human resources, and program processes. Table 2 below illustrates how the IRM Strategic Goals link to the Department's Strategic Goals.

Table 2 — DOE IRM Strategic Goals to DOE's Strategic Goals

IRM Strategic Goal	DOE Business Line Strategic Goals [1]			
	Defense	Energy	Science	Environment
Simplify access to DOE's information and products	Direct	Direct	Direct	Direct
Institute a robust IT governance program within DOE	Crosscutting	Crosscutting	Crosscutting	Crosscutting
Reduce number of cyber- security vulnerabilities at DOE	Direct	Direct	Direct	Direct

[1] *Note that "Direct" indicates that the IRM Strategic Goal provides direct support (i.e., the support provided can be related to information explicitly stated in DOE Business Line Strategic Goal). "Crosscutting" indicates that the IRM Strategic Goal provides crosscutting support (i.e., the support provided supports all goals and is not directly attributable to only one Business Line.)*

The next section provides a detailed background on how DOE utilizes the IRM Strategic Plan to ensure its IRM planning, decisions, management responsibilities, and accountability are positioned to meet the Department's present and future needs.

3.0 IRM OUTLOOK

3.1 Identify Target Opportunities

As a companion to IRM strategic planning, DOE developed an Enterprise Architecture (EA) framework that identifies opportunities for management to leverage both strategic and operational IRM planning activities. Through utilizing its EA, DOE can identify and analyze "points of entry" (*e.g.,* number of investments supporting a business line/sub function) that can result in recommendations for long-term savings and increased efficiency. The EA is also aligned with the annual budget cycle and provides updates that further define the baseline and target architectures based on decisions made in the IT investment-portfolio selection process (part of IT CPIC). The framework operates to reduce performance gaps in the overall portfolio by retiring obsolete systems, developing E-Government solutions that incorporate greater quality and access, and supporting the development of reusable application components.

Overall, DOE's EA guides both the strategic and operational IRM planning activities through its baseline and target oversight as well as its integration with other Departmental processes. As the section below illustrates, these parallel and integrated processes enable the Department to best select, align and maximize its IT portfolio to fulfill its mission.

3.2 IT Investment Portfolio

IRM strategic planning and establishing the EA targets/standards precedes the selection of IT investments to ensure that annual investments and operations fully support established organizational goals and directions. The annual selection of IT investments is done in concert with the budget-formulation process under the direction of the CIO and the Chief Financial Officer (CFO) so that IT investment needs and requests are fully integrated into the annual budget request of the Agency.

Each year, the Department selects IT investments that meet mission needs, close performance gaps, align with EA targets, and align with external drivers such as Government-wide E-Government initiatives. DOE's IT investment activities exceed $2.5 billion per year, constituting approximately 4% of the total Federal budget expended on IT investments. Figure 2 and Table 3 show the breakout of DOE's FY 2005 IT portfolio based on DOE strategic goal supported or on cross-cutting/infrastructure activities.

Figure 2 — DOE's FY 2005 IT Portfolio Breakout

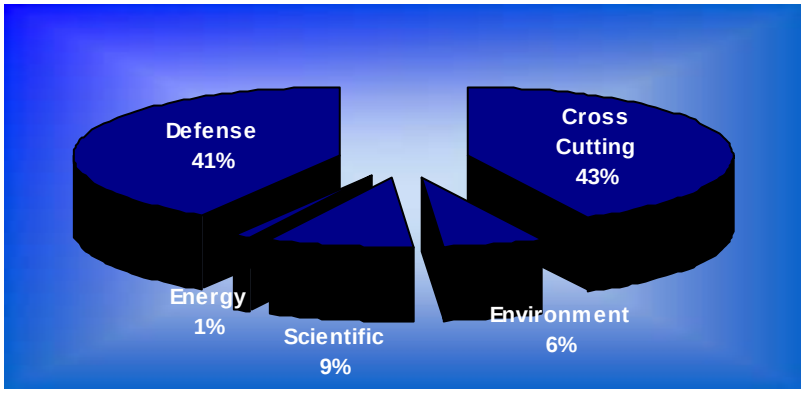


Table 3 — DOE Total IT Investments FY 2005 (in Millions) [1]

Strategic Area	Total Portfolio:		Major Portfolio:	
	Dollars	*Percentage*	*Dollars*	*Percentage*
Defense	1110.4	41.11%	890.34	40.66%
Energy	35.76	1.32%	4.86	0.22%
Scientific	241.95	8.96%	98.11	4.48%
Environment	175.4	6.49%	97.43	4.45%
Cross Cutting	1137.69	42.12%	1098.77	50.18%
Total:	2701.2	100.00%	2189.51	100.00%

[1] Derived from the Department's FY 2005 OMB Exhibit 53 submission

As indicated in Table 3, 58% of DOE's Total Portfolio can be directly attributed to the four strategic goals. Conversely, while a large percentage of the IT Portfolio directly supports DOE's strategic goals, a significant amount of the Agency's investments are for cross-cutting capabilities such as networks, telecommunications, general corporate and staff functions, and cyber-security functions/services. DOE is demonstrating its ability to meet the needs of individual strategic goals while leveraging opportunities across DOE to increase efficiency and lower costs.

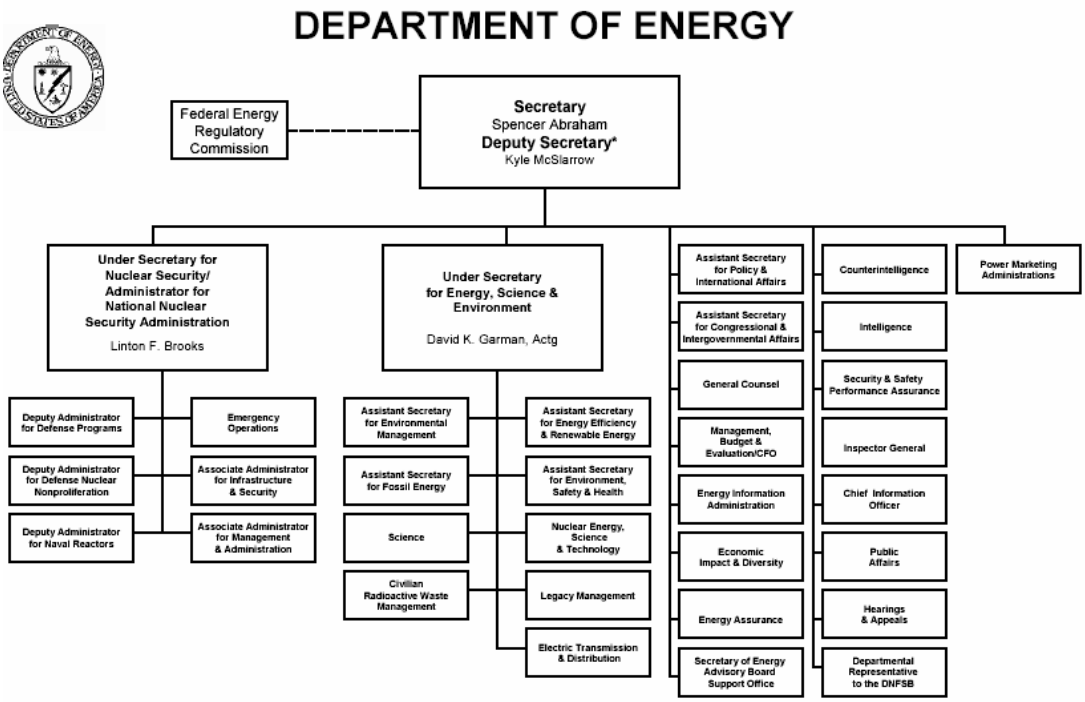
For the past several years, special emphasis has been placed on leveraging E-Government opportunities to maximize the efficiency and effectiveness of IT and to thereby better meet mission needs and strategic goals. A key example of this is the Extended Common Integrated Technology Environment (eXCITE). The eXCITE program gathered multiple, existing, steady-state IT operations tasks under one umbrella and extended those services to all Headquarter elements. The eXCITE program is now being leveraged into a Departmental consolidated infrastructure program that will ensure that cross-cutting infrastructure is acquired and utilized to obtain the maximum benefit to the Agency.

DOE's IT Portfolio is characterized by a wide array of initiatives ranging in size and sophistication, all of which are aimed at improving public service and efficiency. The success of an IT initiative and the Department's portfolio depends on end-to-end management that ensures that DOE accomplishes its mission and goals while actively pursuing the Federal Government's strategic agenda.

3.3 Organization of the Department

The missions of the Department are accomplished through 24 laboratories and technology centers, four Power Marketing Administrations, eight Program Offices, 15 Staff Offices, operations and field organizations located in nine geographic locations across the United States, the Energy Information Administration, and the National Nuclear Security Administration. Supporting these entities are 14,500 federal employees and 100,000 contractors.

Figure 3 — DOE Organizational Structure



DOE's organizational structure is decentralized and aligned with its multiple missions. Department senior management provides strategic plans, IRM strategic plans, EA targets, and standards to Program Offices to guide program planning, decision making, and investing. Program Officials are responsible for acquiring and implementing approved programs and investments to achieve performance goals. In this way, the Department ensures that within the decentralized organizational structure, all decisions and activities continue to support the overall strategic goals of the organization.

The CIO's role is to provide advice and assistance to the Secretary of Energy and other senior managers to ensure that IT is acquired and information resources are managed in a manner that implements the policies and procedures of relevant legislation. Within the structure, the Department has established an agency strategic plan which guides program, mission and activities. The CIO has established this companion document, the IRM Strategic Plan, to guide IT acquisition, operations and management. As a result, IT is fully aligned to support program, missions, and activities.

The IRM Strategic Plan also details a vision of how the Department will use IT to ensure the effective management and delivery of high-quality information to be used and shared in a secure and cost-effective manner. The strategy includes goals, objectives, and outcomes to support mission accomplishment, close performance gaps, and establish a solid infrastructure foundation for the Agency. The following sections detail the IRM strategy for the Department.

4.0 IRM STRATEGIC GOALS

4.1 Goal 1: Simplify Access to DOE Information and Products

The overarching mission of DOE is to advance the national, economic, and energy security of the United States; to promote scientific and technological innovation in support of that mission; and to ensure the environmental cleanup of the national nuclear-weapons complex. Within this program context—in its goal of simplifying access to DOE's information and products— this IRM becomes an enabler to achieving DOE's mission. The Department will successfully realize this goal through E-Government and its development of the Department E-Government Strategy.

DOE's E-Government Strategy directly supports the President's Management Agenda (PMA), the Federal Lines of Business initiative, and the Department's core mission requirements by evaluating and applying new information technologies and modernizing the way we govern by unifying core applications through a secure environment and simplifying access to energy-related Government information and services. The goal is to adhere to the three basic principles established by the PMA:

1. **to be Citizen-centered**, not bureaucracy or Agency-centered;
2. **to be Results-oriented**, producing measurable improvements for citizens; and
3. **to be Market-based**, actively promoting innovation.

Objective 1: Partner and Support the Presidential E-Government Initiatives

Enhancement of its solid E-Government foundation, has enabled the Department to improve its ability to partner and support the Presidential Priority E-Government Initiatives and the Federal Government's Lines of Business (LOB) Initiatives. By instituting a comprehensive governance process for E-Government, DOE ensures a role that achieves the expected PMA and LOB benefits. DOE recognizes that effective E-Government partnership results in Government cost reductions, services to citizens, improvements, and business-process standardization.

Currently, DOE has made significant progress in E-Government through its role as a managing partner of the Financial LOB. In this role, DOE continues to conceptualize, design, and eventually implement streamlined financial-management systems for the Federal Government. As a result, the Government will realize significant cost savings, effect duplicative system reductions, standardized business processes, and increased customer support. The Department envisions leveraging the Financial LOB as the model for future Federal LOB activities.

Outcomes:

- Reduced cost of Government operations
    - Improve support and partnership role in PMA and LOB Initiative.
    - Identify existing DOE investments that are suitable for migration to government-wide initiatives and implement the migration.
- Streamlined delivery of services or products to the customer
    - Work with customers to better identify efficient allocation of services and products.
- Standardized business processes across Agencies
    - Collaborate with similar mission agencies to develop joint efforts and promote best practices across the Federal Government.

Objective 2: Support the Internal DOE E-Government Initiatives

DOE continues to experience significant success with its internal E-Government initiatives known as the Innovative Department of Energy E-Government Applications (IDEA). By building on IDEA's

accomplishments, DOE is continually seeking to create more internal efficiencies, improve the Department's service delivery, and standardize business processes through the innovative use of IT. The Department is pursuing opportunities that include, but are not limited to, standards implementation, change-management techniques, and identification of new internal E-Government initiatives. To ensure continued success, E-Government will continually align and integrate IT with the Department's core business requirements through its governance process.

Outcomes:

- Reduced cost of DOE operations
  - Evaluate the development and implementation of an E-Government Maturity Model.
- Streamlined delivery of services or products
  - Deploy the Department's new core financial system and data warehouse (I-MANAGE).
  - Evaluate emerging technology best practices for possible implementation.
- Standardized business processes across Agencies
  - Identify and implement new internal E-Government Initiatives.
  - Evaluate emerging electronic-business best practices for possible implementation.
  - Participate in intra-agency standards working group.

4.2 Goal 2: Institute a Robust Information Technology Governance Program within DOE

Information Technology is a key supporting element in accomplishing DOE goals. As such, it must be acquired, managed, and used in a way that maximizes its efficiency and effectiveness in supporting missions. To achieve this, the OCIO has established an IT governance structure and process that enables sound management of IT assets. This governance structure includes a Departmental IT capital-planning and investment-control process, EA activity, IT project- and asset-management processes, and enterprise-licensing opportunities to achieve efficiency. Descriptions of objectives, strategies, and outcomes for the IT governance program are described below.

Objective 1: Enhance Capital Planning and Investment Control (CPIC) processes for IT

By enhancing the established CPIC process, the Department has the ability to manage its IT investments as a financial portfolio. Implementing a comprehensive CPIC process ensures that the Department's portfolio of IT investments adequately addresses DOE's business strategies and are managed to achieve the expected benefits in accordance with accurate and complete cost, schedule, technical, and performance baselines. Additionally, monitoring and controlling investments are as important to ensure success as selecting the right portfolio of projects or investments. Investments are monitored over time and resources are shifted to investments that perform best, keeping in mind the established investment rules and parameters with regard to risks and returns. DOE recognizes that effective IT portfolio-management practices result in significant savings of Departmental annual IT budgets, enhanced efficiency, and increased mission alignment.

To date, the Department has made significant progress in enhancing the CPIC process through the use of scorecards at the investment-portfolio level and at the Program level. In addition, improved linkages between IT investments and the annual budget process have been implemented in partnership with the Office of the CFO. To further leverage these accomplishments, DOE is continuing to review its CPIC processes in an effort to identify additional opportunities for improvement. The Department envisions a CPIC process that provides decision-making bodies with the appropriate information to ensure that optimal decisions are made with regard to the selection and maintenance of the Department's IT portfolio.

Outcomes:

- Business cases aligned to the Department's missions
  - Implement IRM Strategic Plan with "line-of-sight" linkages to DOE Strategic Plan.

  - Modify review/approval criteria for all major IT investments to include demonstrated "line-of-sight" linkages to appropriate program and strategic plans.
  - Document closure of performance gaps caused by IT.

- Investment funding aligned to DOE priorities
  - Ensure that all major IT investments are reviewed and that data relative to annual IT selection is provided to the Corporate Review Budget (CRB).
  - Work in partnership with Program Offices and the CFO to identify, align, and redirect funding for investments targeted for migration to corporate or Government-wide E-Government initiatives.

Objective 2: Maintain a Complete, Mature Enterprise Architecture (EA)

The development of the Department Enterprise Architecture Repository (DEAR), compiled to include mapping of IT systems and applications to the Federal Enterprise Architecture Business Reference Model (BRM) and Service Component Reference Model (SRM), has increased the efficiency of DOE's IT spending while supporting the consolidation of its infrastructure. The Department plans to create a "line of sight" through each reference model in DEAR. The tool is currently populated with IT investments, DOE's strategic goals, individual program strategic goals, and mappings from these investments and goals to the reference models. To map between the EA and the mission and goals of the Department, all systems will be directly linked to investments, which have been populated and validated in DEAR.

The EA is operational and provides an enhanced performance impact by fully integrating with investment planning and execution. The Department has developed and executed a communication and outreach strategy with Program and Staff Offices to ensure that guidance is provided for target goals in managing IT investments.

Outcomes:

- Identify and implement common solutions and eliminate redundant systems
  - Establish and implement a target EA for the Agency.
  - Leverage FEA model to classify and assess existing IT investments and develop recommendations for improving the IT investment portfolio for the Agency.
- Use EA to drive IT investment decisions
  - Enhance the CPIC select process to better utilize EA information.
  - Enhance the IT governance process to ensure that EA information is provided to senior managers in a timely way to better inform decision making.
- Establish a single, consolidated, integrated DOE-wide infrastructure
  - Establish and implement a DOE Consolidated Infrastructure Program to identify and take advantage of opportunities to leverage existing infrastructure and eliminate redundancy across the Agency.

Objective 3: Ensure Effective Information Technology Project Performance

Technology investments provide DOE with the necessary means to achieve its four strategic goals as well as those goals identified in the PMA. However, as with any type of investment, the success of IT investments requires thorough planning and effective management throughout the investment life cycle. Currently, the Department evaluates the business cases on their baseline goals each year to ensure that milestones and costs are accurately planned and documented. Subsequent to the evaluation of planned baseline goals, DOE has implemented a quarterly review process that evaluates investments on their ability to achieve the planned cost, schedule, and performance goals that were established in the business cases. This review process is facilitated by the OCIO, and the Department's IT Council is responsible for the final investment evaluations each quarter.

The Department will continue to mature its methodologies for ensuring effective IT project performance by implementing more standardized processes for developing and evaluating baseline goals for investments, as well as enhancing the quarterly review process for assessing the achievement of those goals. This effort will provide more stringent reporting requirements and evaluation criteria to ensure that each Program Office is accurately reporting their baseline goals and performing regular reviews of their investments.

Outcomes:

- Adherence to cost, schedule, and performance targets
  - Develop standardized requirements for defining cost-and-schedule baseline goals and for reporting actual results. Validate that requirements are met during the business-case reviews that are conducted in support of the annual budget submission process.
  - Implement performance-goal reviews during the Select phase that evaluates "line-of- sight" connections to program plans and DOE Strategic Plan (*i.e.,* adherence to DOE Performance Management Framework) and also ensure that performance goals define the current baseline and provide quantifiable measures/metrics.
  - Develop an automated template for the quarterly review process that is linked to the Cost and Schedule table and the Performance Goals table in the Exhibit 300 to improve the ease of reporting and ensure that the achievement of planned goals is continuously evaluated throughout the year.
  - Institute reporting requirements where IT Project Managers report monthly on cost and schedule variance.

- Timely decisions on projects in remediation
  - Implement the use of corrective-actions strategies into the quarterly review process for IT investments that have demonstrated negative performance trends for two quarters or more.
  - Provide performance-review data to DOE's senior leaders when investments show continued performance issues for two or more quarters.
  - Adherence to cost, schedule, and performance targets.
  - Ensure timely decisions on projects in remediation.

Objective 4: Enable Asset and Configuration Management

To enable asset and configuration management, the Department is in the process of identifying and implementing standard configuration guidelines for desktops and infrastructures. The Department is establishing governance procedures for managing process changes, including the development of a Configuration Control Board (CCB), and a waiver-application process.

The development of an efficient configuration-management process will ensure that the development and acquisition of applications and systems can be integrated to improve the connectivity and interoperability of the entire DOE community in alignment with DOE's Information Architecture vision.

Outcomes:

- Accurate audit trail of changes
  - Leverage the progress made by the eXCITE program to establish standard infrastructure desktop profiles.
  - Implement change-control process, including the requirement to obtain an approved waiver to deviate from standards configuration(s).
- Significant reduction in vulnerabilities
  - Identify and maintain appropriate cyber-security postures for standard configuration.

    - Link change-control processes to DOE vulnerability-tracking program to ensure standard configurations.
- Timely patch management
    - Implement both automated patch updating whenever feasible and patch update standards for standard configurations to ensure that vulnerabilities are identified and remediated in a timely manner.

Objective 5: Implement Enterprise Licensing

Procuring software licenses that apply across DOE, known as enterprise licensing, can potentially save the Department a significant percentage of licensing cost. This is done by aggregating enterprise software requirements and having a single contract vehicle to facilitate software acquisition. This approach better uses personnel by developing and following specialized acquisition expertise to enter into strategic solutions. This enterprise licensing effort will streamline acquisition efforts for both the Agency and industry, reducing the cost of commodity software purchases while achieving the same level of quality. By implementing these buying practices, acquisitions and support costs will be reduced, leading to the increase use of standards-compliant software while ensuring the cyber-security posture of DOE.

Outcomes:

- Reduce costs
    - Implement a SmartBuy program in collaboration with the General Services Administration (GSA) to assist in negotiation of lower prices for some types of software.
- Enable standardization
    - Identify software through the enterprise licensing program that is widely used across the Agency.

Objective 6: Recruit, Develop, and Retain a Qualified, Professional IT Workforce

DOE recognizes the strategic management challenge required to hire and retain a highly skilled IT workforce and is working to address the criticality of strengthening human capital as a driver for organizational effectiveness. The PMA has identified a specific human-capital initiative that is directed toward aligning a professional workforce in support of an Agency's mission, goals, and strategies. The Department has developed recruitment requirements to focus efforts on identifying qualified candidates who are easily able to adapt to changes brought about by new technologies. In addition, initiatives have been implemented that focus on maximizing employee performance by instituting development programs and enrichment opportunities that motivate and inspire employees. DOE has already made significant progress in the area of human capital with the implementation of Corporate Human Resource Information System (CHRIS) Workflow.

DOE will continuously strive to maintain a high-performing workforce through enrichment opportunities, comprehensive training programs, leadership development, and an open culture that promotes the sharing of intellectual capital and demonstrates high standards of integrity for employees. Because of competitive sourcing and constantly emerging technologies, a workforce must be maintained that is both easily adaptable and highly skilled in mission critical competencies.

Outcome:

- Align workforce skills with DOE missions and priorities
    - Reward employees while developing a high-performing and accountable workforce.
    - Implement a performance framework for accountability at the employee level.
    - Implement a new performance-management system to better recognize and reward superior performance.

4.3 Goal 3: Reduce the Number of Cyber-Security Vulnerabilities at DOE

DOE is committed to ensuring that DOE information systems are protected in a manner that reduces system vulnerabilities in a cost-effective way, consistent with the harm that would result from the compromise of the information or system that processes and stores that information. To achieve this, the Department has implemented a Critical Infrastructure Planning process, a Certification and Accreditation process to ensure compliance with Federal Information Security Management Act (FISMA), and the development of an enterprise wide security plan.

Objective 1: Ensure Compliance with FISMA and All Other Cyber-Security Government-Wide Regulations, Policies, and Procedures

Over the next year the Department will develop two separate manuals for unclassified and classified computing that will provide methodologies and procedures for cyber security within the Department. This redirected approach will accommodate DOE's need for a more flexible, consolidated Policy/Directives framework that can expedite policy gap closures and better position the Department to realize greater operational efficiencies. Further, DOE recognizes the inherent differences between national security systems and unclassified systems. In most cases, national security systems require more rigor in their application and testing of security controls. By eliminating or tailoring requirements around the two types of systems, the framework allows DOE more opportunity to apply operationally and fiscally sound cost effective controls to mitigate risk. See Appendix C for the proposed DOE Security Directives Framework.

Outcomes:

- Improve the FISMA annual grade
    - Increase oversight and monitoring of FISMA compliance requirements within DOE.
- Security policies and procedures incorporate government and industry best practices
    - Institute a government-wide review cycle for polices and procedures to ensure continual update to address changing requirements.
- Identify and proliferate common cyber security controls and measures
    - Collect Baseline Security Requirements that will identify and provide standardized lists of security controls for each category of system within the Department.

Objective 2: Implement a Comprehensive DOE-Wide Security Management Program to Improve Cyber Security

DOE is working within the Agency to develop and implement a comprehensive DOE-wide security management program to improve cyber security. DOE is focusing on those cyber-security initiatives that have a significant role to play in continuous improvement of the program and on improvement opportunities which will be highlighted through such activities as FISMA reporting, Plan of Action and Milestones (POA&M) management, and GAO audits.

Outcomes:

- Built-in security and privacy in 100% of IT investments
    - Conduct Privacy Impact Assessments (PIA) for all new or expanded technology investments. The PIA will also provide systems developers with the means to ensure compliance with all relevant privacy policies, regulations, and guidance, both Government-wide and specific to DOE.
    - Institute partnerships with the Office of the Inspector General (IG), General Council (GC), and other elements in the OCIO and beyond to address the need to fully integrate security and privacy requirements into IT investment.

    - Develop a performance-measurement oversight and assessment process to ensure the Department is moving toward having security and privacy built into 100% of IT investments.
- 100% C&A of operational systems
    - Continue, as well as improve, the monitoring of all C&A processes to encourage 100% compliance to ensure, with relatively limited resources, that systems are evaluated and meet the minimal security-control requirements for their established level of sensitivity and risk.
    - Leverage existing PO&AM and FISMA Quarterly Updates to track the progress of system certification and, where needed, provide additional emphasis and resources.

APPENDIX A: LIST OF ACRONYMS

APP	Annual Performance Plan
BRM	Business Reference Model
C&A	Certification and Accreditation
CCB	Configuration Change Board
CFO	Chief Financial Officer
CIO	Chief Information Officer
CHRIS	Corporate Human Resource Information System
CPIC	Capital Planning and Investment Control
CRB	Corporate Review Budget
DEAR	Department Enterprise Architecture Repository
DOE	Department of Energy
EA	Enterprise Architecture
eXCITE	Extended Common Integrated Technology Environment
FEA	Federal Enterprise Architecture
FISMA	Federal Information Security Management Act
GAO	General Accounting Office
GC	General Council
GPEA	Government Paperwork Elimination Act
GPRA	Government Performance and Results Act
GSA	General Services Administration
IDEA	Innovative Department of Energy E-Government Applications
I-MANAGE	Integrated Management Navigation System
IRM	Information Resources Management
IT	Information Technology
LOB	Line of Business
NIST	National Institute of Standards and Technology
NNSA	National Nuclear Security Administration
NSF	National Science Foundation
OCIO	Office of the Chief Information Officer
OMB	Office of Management and Budget
PIA	Privacy Impact Assessment
PMI	Privilege Management Infrastructure
PMA	President's Management Agenda
POA&M	Plan of Action and Milestones
R&D	Research and Development

APPENDIX B: DOE E-GOVERNMENT PARTICIPATION

DOE Participation in Inter-Agency Initiatives and Federal Lines of Business

Inter-Agency Initiative	Role
Government to Citizen (G2C)	
GovBenefits.com	Partner
Government to Business (G2B)	
Business Gateway	Partner
e-Rulemaking	Partner
Consolidated Health Informatics	Participant
Federal Asset Sales	Participant
Government to Government (G2G)	
Grants.gov	Partner
SAFECOM	Partner
Disaster Management	Participant
Geospatial One-Stop	Participant
Internal Efficiency and Effectiveness (IEE)	
e-Clearance/ e-QIP	Partner
e-Records Management	Partner
e-Travel	Partner
GoLearn	Partner
Enterprise HR Integration	Participant
e-Payroll	Participant
Integrated Acquisition Environment	Participant
Recruitment One-Stop	Participant
Cross-Cutting Initiatives	
e-Authentication	Partner

Line of Business	Role
Financial Management	Partner
Grants Management	Participant
Human Resource Management	Participant

Internal DOE E-Government Initiatives

Innovative Department of Energy E-Government Applications (IDEA)
Government to Citizen (G2C)
Department Web Presence
Energy Employees Occupational Illness Compensation
Streamlined Departmental Grants Processing
Streamlined FOIA Processing
Government to Business (G2B)
e-Assessment of FOCI Companies
e-R&D Portfolio Management, Tracking and Reporting
Intellectual Property Portfolio Online
Government to Government (G2G)
e-Signatures
Nuclear Materials Accountability
CN e-Case Management System
e-Gov Department Integrated Security System
Internal Efficiency and Effectiveness
Consolidated DOE Intranet
eXCITE (Extended Common Integrated Technology Environment)
I-MANAGE
Secure Network Services

APPENDIX C: PROPOSED DOE DIRECTIVES FRAMEWORK

Unclassified Systems

DOE O 205.1
Cyber Security
Management
Program

National Security Systems

Unclassified Systems Cyber Security Program Manual

Common Program Elements

Risk Management Program
(Operational)

- Certification & Accreditation
  - Security Plans
  - Contingency Plans
  - Risk Assessment
  - IV&V
- Vulnerability Management
  - Configuration Management
  - Patch Management
- Threat Management
- Critical Infrastructure Protection
- Categorization of Information & Information Systems
- Minimum/Baseline Requirements

Security Program Management (Administrative)

- Budget & Procurement
  - CPIC
  - Enterprise Licensing
  - Smart Buy
- Program and Project Management
- Performance Oversight Assurance/ Metrics & Reporting
- Policy
- Training, Education & Awareness
- Enterprise Architecture

National Security Systems Cyber Security Program Manual

Mission Assurance
Identify, Prioritize, Protect